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PNM 03

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MEMORANDUM

TO: File, PNM/Red/93

FROM: Jane Cramer, Technical Compliance Section *JAC*

THROUGH: Steve Alexander, Technical Compliance Supervisor *SMA*

DATE: August 10, 1993

RE: **Hazardous and Radioactive Materials Bureau (HRMB) and Public Service Company of New Mexico Person Generating Station (PNM) Meeting on completion of Phase I of the Corrective Action Directive (CAD) for the shallow contamination.**

Attendees:

Steve Alexander, HRMB  
Jane Cramer, HRMB  
Marc Sides, HRMB, Permitting  
Steve Anderson, PNM Project Manager  
Ron Johnson, PNM Environmental Manager  
Gary Richardson, Metric Corp., consultant to PNM  
Doug Downey, Dave Meyers, and Lloyd Ike, Engineering-Science, Inc. (**ESI**), consultant to PNM

On August 10, 1993, Hazardous and Radioactive Materials Bureau staff met with PNM representatives to discuss the HRMB review of the PNM CAD submittals:

1. Assessment Summary Report, and,
2. Corrective Measures Technology Report.

ESI presented their recommended conceptual approach for remediation (CAD Phase II) to solicit early input from HRMB. Metric Corp. presented an update on the status of the deep plume investigation.

HRMB commented that the CAD calls for:

1. monitoring of different wells at a different frequency than that proposed by PNM, and,
2. a pump and treat proposal to be included in the Corrective Measures Technology Report.

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PNM proposed the following changes to the CAD assessment monitoring well network:

- Add wells PSMW-1R, -37, -8A, -13B, to fill data gaps.
- Drop wells PSMW-9, and 12A, because proximity to other wells renders them redundant.
- Decrease to semi-annual sampling because quarterly sampling has shown little seasonal variation, generating little useful data. And,
- drop wells PSMW-12B, and -15B because these wells are completed in the second (or lower) flow zone, and pumping of them could potentially spread contamination into this presently uncontaminated zone.

PNM will also develop a written request, pending possible future permit modification, to substitute or replace point-of-compliance wells, PSMW-5 and -6. PNM is unable to obtain groundwater samples from these wells due to the regional drop in water table elevation.

ESI presented a review of remediation alternatives they had considered and discussed their recommended approach to remediation, including a pump and treat system, to solicit early HRMB input. ESI characterizes the geology as mostly unconsolidated, sandy alluvium. ESI conceptualizes the extent of contamination as a narrow, vertical, cylinder-shaped zone located beneath the former tank location, and, a horizontal zone at the water table, probably extending down-gradient 100 feet. Their remedial approach will concentrate on these zones, as well as a contaminated "new vadose zone" created above the horizontal zone of contamination by the declining water table. They postulate that exchange is still occurring at the water table and therefore propose source removal. They anticipate that no dense non-aqueous phase liquids are present.

Their proposal will be submitted for HRMB review as Phase II of the CAP. The proposal combines pump and treat, vapor extraction, and air stripping, (and granular activated carbon polishing if needed). The topic of "natural attenuation", e.g. chemical transformations or biological breakdown, was also discussed in general terms. Each well will be dual purpose; with a vacuum system to extract vapor and a submersible pump to remove water. The remedial approach will consist of the following:

Step 1 - a 90-day pilot/testing phase to gather and evaluate design data for Step 2, address different permeabilities, determine area of influence of pumping wells, etc,... and will include installation of 3 wells (one in the source area).

Step 2 - install additional pump and treat/vapor extraction system wells using Step 1 data to space wells and size equipment.

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ESI also proposed development of a mass transport model, Slug 2D, to determine likely clean-up levels/feasibility for the final 5% of contamination. They also propose to back up the modelling with long-term monitoring. The proposed goal would be to cease pumping when residuals reach no risk concentrations for purposes of cost effectiveness. HRMB staff commented that cost is not considered by the hazardous waste regulations when evaluating remedial approaches.

Metric presented information on the status and plans to drill the first cluster at PSMW-19, near the southeast corner of the former Schwartzman property, recently purchased by PNM. This location lies west of I-25, near abandoned production well, PW-3. Installation of the first cluster is scheduled to begin approximately August 23. Installation of well, gravel pack, bentonite seals etc. will probably take two weeks.

Permit modifications were also discussed, including possible petitioning for Alternate Concentration Limits and possible disturbance of the cap over the RCRA unit during remediation. The integrity of the cap would be maintained. PNM will formally request approval to disturb the cap.

cc: Benito Garcia, Bureau Chief  
Garth Graves, NMED District I  
Dennis McQuillen, NMED, Groundwater Remediation